

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: INVUE

Report Number: P596748

Luminaire Tested: **MSA-SA4A-827-U-SL4**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596748  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-827-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11101 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

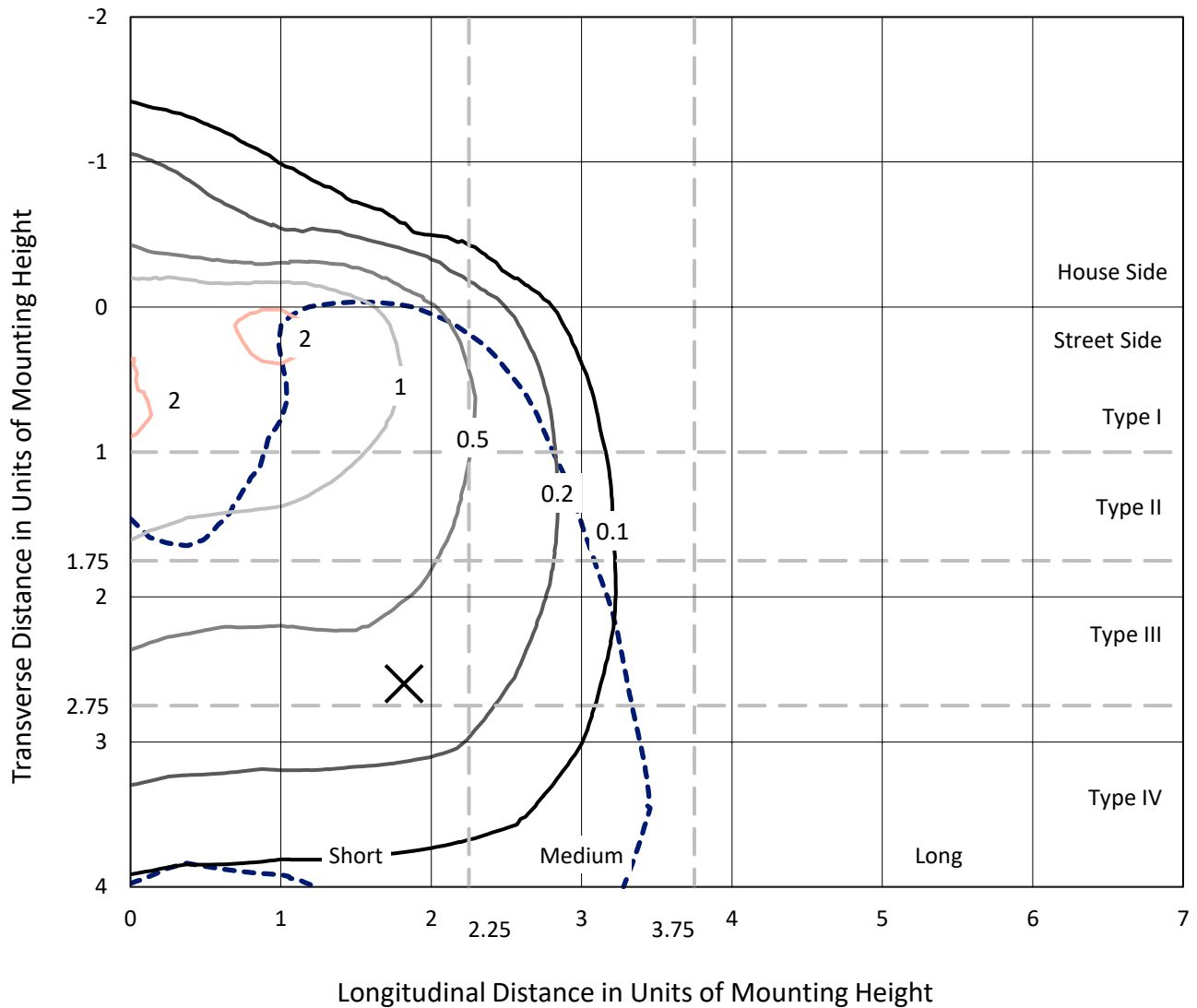
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

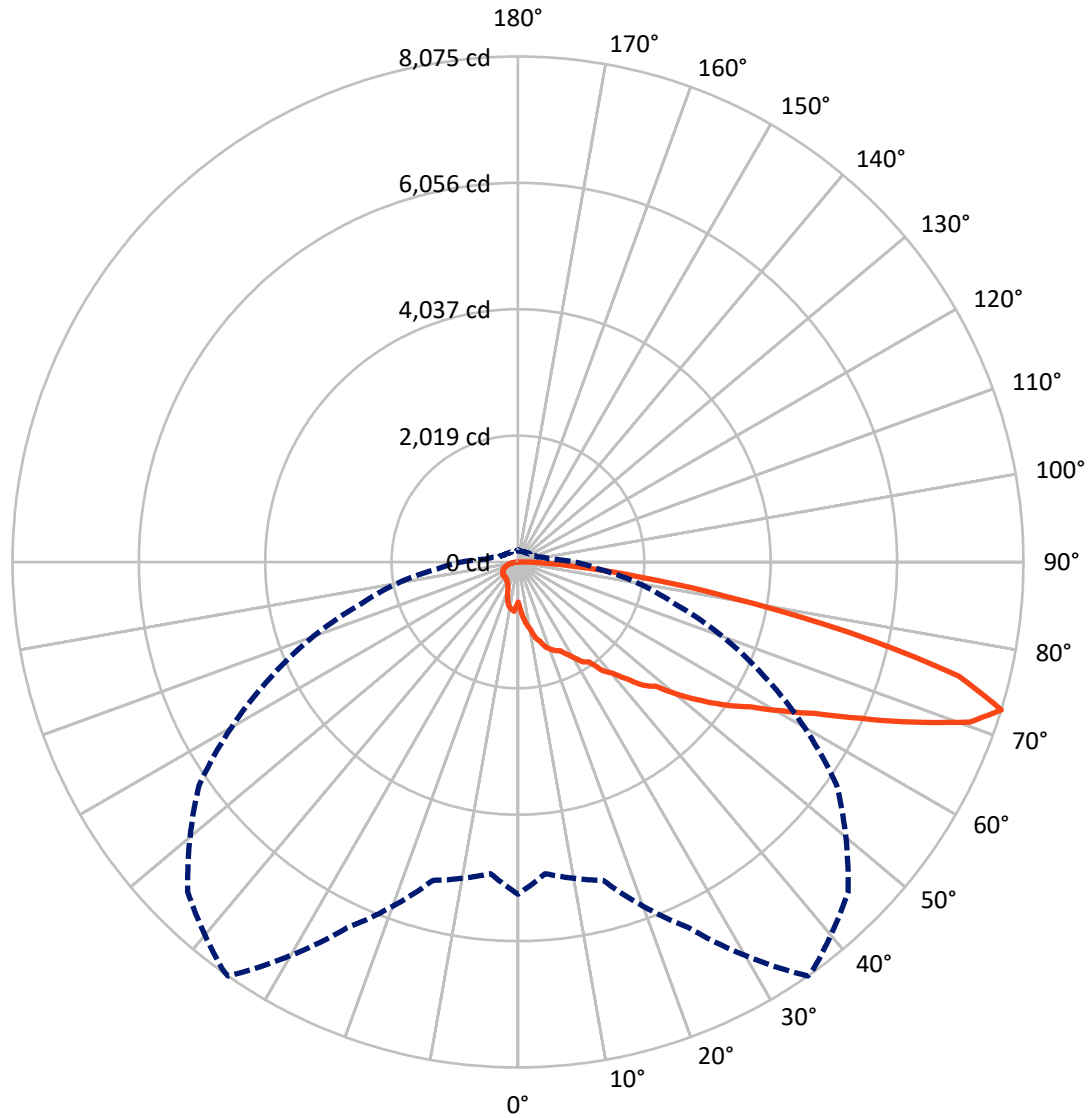
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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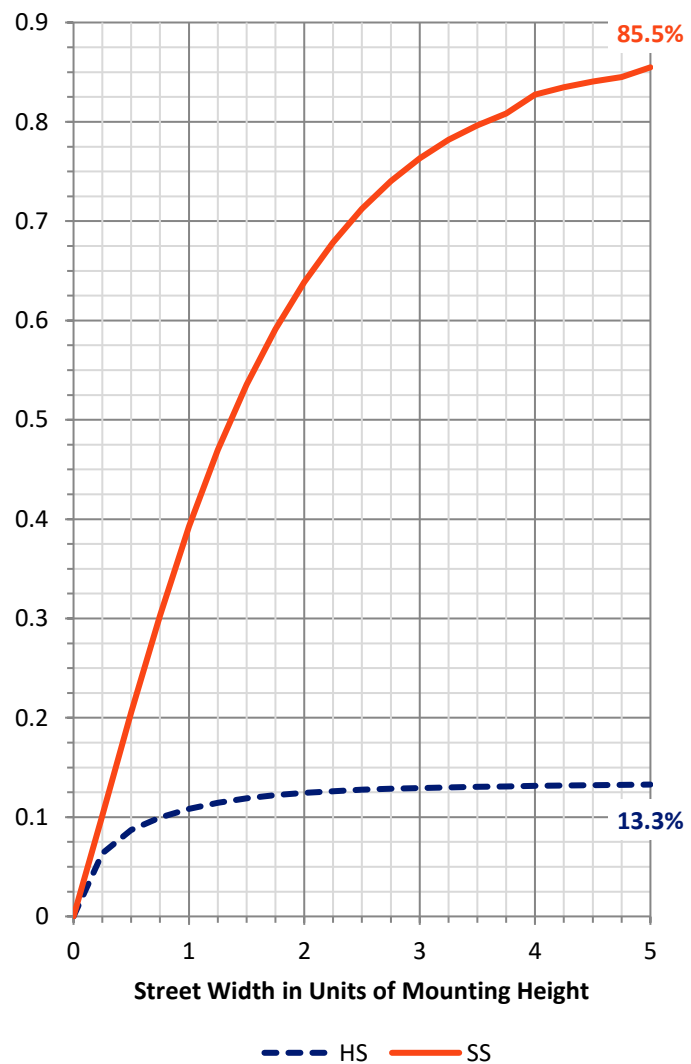
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1489.7	0.0	1489.7
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	9611.3	0.0	9611.3
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	11101.0	0.0	11101.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	0.8
10°-20°	300.3	2.7
20°-30°	521.9	4.7
30°-40°	872.2	7.9
40°-50°	1513.8	13.6
50°-60°	2288.5	20.6
60°-70°	2964.7	26.7
70°-80°	2187.6	19.7
80°-90°	366.6	3.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	11101.0	100.0
0°-180°	11101.0	100.0

**Coefficient of Utilization**



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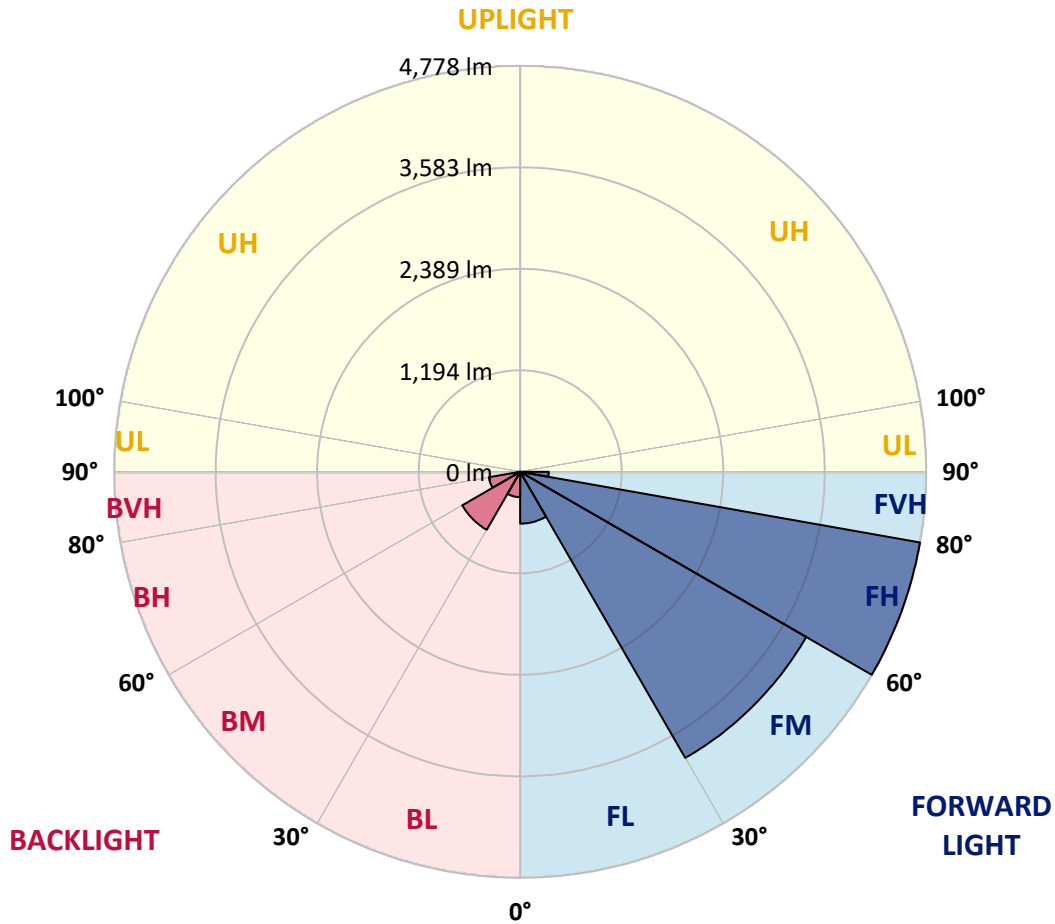
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	609.7	5.5			
FM (30°-60°)	3887.2	35.0			
FH (60°-80°)	4777.8	43.0			G2/5000
FVH (80°-90°)	336.6	3.0			G3/500
BL (0°-30°)	297.8	2.7	B1/500		
BM (30°-60°)	787.3	7.1	B1/1000		
BH (60°-80°)	374.6	3.4	B1/500		G1/500
BVH (80°-90°)	30.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5
2.5°	800.3	761.9	728.7	727.3	758.1	769.9	765.2	754.8	742.5	716.4	773.2
5°	1002.6	947.6	937.2	924.9	896.9	904.5	859.0	893.6	904.5	929.6	967.5
7.5°	1122.0	1089.8	1064.6	1054.2	1005.9	1000.2	966.6	1015.8	1036.7	1033.4	1089.8
10°	1168.9	1139.5	1141.4	1107.3	1091.6	1098.3	1102.1	1103.0	1115.8	1126.2	1097.8
12.5°	1193.0	1204.4	1246.1	1222.9	1242.8	1250.8	1290.6	1249.9	1251.3	1197.8	1227.2
15°	1314.8	1343.2	1319.1	1318.1	1312.0	1325.2	1359.3	1331.9	1353.2	1336.1	1298.2
17.5°	1461.7	1470.2	1423.8	1404.8	1429.5	1425.2	1416.7	1420.9	1367.9	1466.4	1420.0
20°	1506.7	1540.3	1479.2	1404.8	1486.3	1497.2	1495.3	1476.8	1385.9	1528.0	1483.0
22.5°	1637.5	1592.0	1543.7	1496.3	1538.0	1544.1	1533.7	1489.6	1459.3	1513.3	1548.9
25°	1696.7	1685.8	1624.2	1618.5	1572.6	1550.8	1568.8	1556.0	1526.1	1622.3	1583.0
27.5°	1832.2	1819.4	1677.7	1736.0	1669.2	1663.5	1568.3	1610.9	1640.8	1633.7	1692.4
30°	1985.7	2000.4	1793.4	1851.6	1774.4	1764.0	1668.3	1722.3	1742.7	1749.3	1822.7
32.5°	2156.3	2196.6	1990.9	1943.1	1901.9	1909.0	1827.9	1729.4	1808.5	1963.4	1995.2
35°	2341.1	2357.7	2142.1	2070.1	1962.5	1954.9	1956.3	1968.7	2048.7	2225.5	2250.1
37.5°	2682.7	2605.9	2416.9	2234.5	2198.5	2127.9	2175.7	2213.6	2293.7	2564.7	2668.0
40°	2893.1	2836.2	2548.1	2442.5	2343.0	2349.6	2439.1	2438.7	2627.7	2907.3	3065.0
42.5°	3087.8	3025.7	2754.2	2648.1	2553.8	2577.0	2602.6	2647.6	3010.1	3460.7	3532.7
45°	3244.6	3108.6	2913.4	2889.7	2812.0	2781.2	2889.7	2961.8	3467.3	3908.4	3950.1
47.5°	3351.2	3239.4	3048.5	3027.6	2970.3	3045.6	3341.7	3388.2	3821.7	4358.1	4354.7
50°	3513.3	3360.2	3187.8	3176.9	3338.4	3378.7	3739.7	3735.0	4166.6	4731.4	4653.2
52.5°	3699.9	3507.1	3319.9	3437.0	3683.4	3703.3	4016.4	4143.9	4543.3	5091.5	4887.3
55°	3914.6	3699.0	3518.0	3674.4	4041.1	3982.3	4299.3	4610.6	5014.7	5471.0	5056.4
57.5°	4180.4	3918.8	3772.4	4010.3	4367.5	4419.7	4704.4	5096.2	5394.3	5707.0	5179.6
60°	4460.9	4153.8	4019.8	4246.2	4824.8	4884.5	5163.1	5499.9	5819.7	5929.2	5156.4
62.5°	4728.6	4396.4	4275.1	4554.7	5331.7	5479.6	5685.2	5899.8	6173.7	5983.2	4875.5
65°	5026.6	4694.0	4617.7	5037.0	6019.2	6166.1	6434.7	6370.3	6295.0	5791.8	4410.6
67.5°	5342.1	5004.3	5018.5	5596.6	6829.9	6855.0	7267.7	6839.4	6152.4	5284.8	3630.3
70°	5511.8	5165.9	5312.3	6193.1	7654.8	7618.8	7703.1	6965.4	5571.0	4177.5	2502.2
72.5°	5306.1	4997.7	5265.9	6444.2	8074.6	8035.7	7458.6	6217.3	4355.7	2597.9	1297.3
75°	4492.6	4195.1	4605.4	5744.4	7269.1	7305.1	6347.6	4623.4	2493.6	1044.7	538.7
77.5°	3052.7	2899.2	3250.8	4281.8	5399.5	5524.1	4709.6	2703.5	1047.1	432.6	326.0
80°	1613.3	1540.3	1800.0	2466.6	3419.0	3511.8	2769.4	1346.6	536.3	280.0	232.6
82.5°	876.5	845.7	985.0	1268.4	1942.6	2023.6	1436.1	894.5	361.5	175.3	142.1
85°	588.9	577.1	669.5	681.3	918.7	945.2	752.4	688.9	217.0	85.8	93.8
87.5°	294.7	282.9	352.5	311.3	350.6	351.1	344.9	439.7	55.0	28.4	17.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5	641.5
2.5°	774.2	757.6	700.3	699.8	708.3	702.7	706.9	683.7	673.8	719.2	716.9
5°	962.3	912.5	864.7	848.1	828.7	786.5	788.9	789.4	782.3	809.3	811.2
7.5°	1072.7	1013.0	968.9	880.8	811.6	757.6	764.7	772.8	764.7	800.7	814.0
10°	1088.8	1041.4	988.8	890.8	844.8	796.0	746.7	703.1	697.9	681.3	686.5
12.5°	1184.5	1145.2	1035.3	927.7	874.2	799.3	709.3	659.5	617.8	624.9	611.7
15°	1263.2	1235.2	1103.5	962.8	834.8	742.0	646.3	578.0	540.6	536.3	523.1
17.5°	1369.8	1330.0	1109.7	938.6	784.1	672.8	564.8	487.5	471.4	464.8	458.2
20°	1420.9	1349.4	1087.4	862.8	724.9	590.4	484.2	417.9	413.2	425.0	422.6
22.5°	1465.5	1365.5	1067.5	816.8	632.5	507.0	429.3	385.7	380.5	395.6	398.5
25°	1491.5	1411.5	1045.7	769.9	575.2	444.9	388.0	363.4	364.4	384.3	381.9
27.5°	1609.0	1427.6	990.7	714.5	509.3	398.9	368.1	355.4	350.1	377.6	380.0
30°	1683.0	1532.8	978.4	655.7	460.5	365.3	350.1	344.9	344.0	377.1	379.5
32.5°	1820.4	1567.8	984.1	591.8	416.5	354.9	336.9	336.4	345.9	377.6	381.4
35°	2010.8	1715.6	956.6	555.3	392.3	338.8	326.5	330.2	346.4	380.9	386.2
37.5°	2382.3	1854.9	965.1	521.2	384.3	333.6	323.6	326.0	352.0	389.5	403.7
40°	2676.5	2107.5	951.9	504.1	373.4	332.6	317.4	326.9	351.6	394.2	407.0
42.5°	3102.9	2308.9	953.3	487.1	372.9	328.8	316.5	327.9	350.6	389.9	407.5
45°	3468.7	2489.4	973.7	477.1	368.1	335.0	315.1	329.3	344.5	374.8	394.2
47.5°	3768.6	2690.7	994.5	467.6	366.3	340.7	313.7	319.3	334.0	357.7	375.3
50°	4013.1	2832.4	1021.0	465.8	366.3	337.8	309.9	309.4	321.7	340.7	357.2
52.5°	4203.6	2932.4	1039.1	468.1	366.3	326.9	305.1	301.3	308.9	322.7	339.2
55°	4341.5	2963.2	1024.4	474.3	365.8	317.0	296.6	293.3	297.1	306.6	322.2
57.5°	4396.9	2882.2	936.7	463.4	365.8	309.9	286.2	282.4	286.2	293.3	308.9
60°	4258.1	2621.6	810.2	435.4	358.7	300.4	274.3	272.0	277.6	283.8	299.0
62.5°	3909.8	2275.2	675.2	402.3	344.0	292.3	263.0	263.4	272.4	281.0	296.1
65°	3368.8	1856.4	562.9	368.6	325.5	279.5	251.1	254.4	267.2	278.6	293.8
67.5°	2650.9	1375.5	473.8	335.9	299.4	258.7	237.8	238.8	247.8	258.7	273.4
70°	1772.0	875.1	389.5	297.5	265.3	231.7	217.5	214.2	211.8	221.3	234.1
72.5°	898.8	516.9	319.8	254.4	228.4	202.3	191.4	182.9	176.3	181.9	191.9
75°	471.0	361.5	258.2	211.3	188.6	172.0	163.9	152.6	147.8	151.1	158.3
77.5°	333.1	282.9	208.9	167.3	153.5	136.5	137.9	126.0	122.2	124.1	131.7
80°	255.9	224.1	160.6	126.5	118.5	101.9	106.6	99.5	94.8	93.8	99.5
82.5°	174.4	168.7	114.2	88.6	82.9	71.1	77.7	74.9	68.7	64.9	67.8
85°	117.5	111.8	69.6	51.2	48.8	37.0	47.4	45.5	40.3	34.6	35.1
87.5°	20.4	37.4	19.9	12.8	11.8	4.3	10.9	10.4	9.5	4.7	3.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)